LDI: IT TAKES TWO

Jim Keohane on Healthcare of Ontario Pension Plan's two-step portfolio

Olga Peram, CFA

In the modern economic environment, where pension deficits have become all too common, the Healthcare of Ontario Pension Plan (HOOPP) exhibits a solid funded status with assets that are at 114 percent of its liabilities. According to Jim Keohane, HOOPP's CEO, this plan surplus is attributed to the quality of the governance model of the plan. At CFA Society Toronto's Annual Pension Conference, held in Toronto on April 24th, Keohane spoke about HOOPP's approach to liability-driven investment (LDI) and why it's unique. The plan is structured as a private organization with members as plan owners, says Keohane. "The mission of the plan is not to beat other guys but to meet its pension obligations, which brings clear focus," he notes.

In the late 1990s, HOOPP had a pension surplus due to high allocations to equities. However, the situation changed dramatically between 2000 and 2002 due to a stock market sell-off caused by the bursting high-tech bubble. As a result, the plan's funded status suddenly moved from positive to negative. According to Keohane, this was a wake-up call for the plan, which led the organization to evaluate the risks that the plan faced.

Three main risks

There are three main risks to the pension plan: interest rate risk, inflation risk, and equity risk. Each of these, according to Keohane, can have a devastating effect on the plan due to its interest rate and inflation sensitivities. For example, a one percent change in interest rates can lead to a $7 to $10 billion change in the value of the plan. Risk management has been a central part in managing the plan's obligations with its move towards liability-driven investing.

HOOPP's LDI investment approach structures the pension portfolio into two parts: (1) a liability hedge portfolio and (2) a return-seeking portfolio. This structure allows the pension plan to keep funded status stable regardless of market environment.

The liability hedge portfolio, as the name suggests, ties its investments to the plan's liabilities. It allocates 12.5 percent to real estate to provide a hedge against inflation and another 12.5 percent to real return bonds to ensure against the cost-of-living adjustment. Seventy percent of funds are in mid- to long-term bonds.

The expected return for the liability hedge portfolio is about 4 to 4.5 percent, but to meet pension obligations, the HOOPP plan requires a 6.5 percent return. To bridge this 2 percent gap, the return-seeking portfolio comes into play through its use of derivatives-based strategies and 5 percent allocation into private equity.

The return-seeking portfolio has several major exposures. Beta exposure to public equities provides HOOPP with hybrid investment structures and exposure to equities through derivatives without reducing actual allocation to bonds. It also includes credit exposure through investments in five-year credit default swaps and selling credit protection. There is also a long-term option portfolio that sells 10-year options on S&P 500 and hedges exposures with futures. And there is a hedge fund portfolio with various alpha strategies such as long–short and index arbitrage.

Keohane notes that, "HOOPP looks for opportunities that are skewed towards positive return distribution," which would allow for enough return without excessive volatility.

HOOPP invests in real assets such as direct real estate and private equity. The direct real estate portfolio provides a solid mix of industrial and office properties across Canada. Real estate properties are focused core properties with some exposure to redevelopment investments. HOOPP does not currently have infrastructure investments because they do not feel the current market pricing appropriately compensates for the inherent risks.

The total portfolio is well diversified, and the plan is focused on "investments with strategic advantages in the marketplace," as Jim Keohane says.

HOOPP also has several advantages in implementing LDI, such as a long time horizon and the ability to use derivatives. It isn't overconstrained, and it has a good balance sheet. There are also barriers to entry when it comes to LDI implementation, including investments into support systems and having core expertise in collateral and cash management. Keohane also notes that HOOPP does not rely on the value-at-risk approach used by investment dealers in managing risks. Instead, the plan uses stress testing and risk contribution as important tools in managing its portfolio risks.

With a current plan surplus of 114 percent, Jim Keohane thinks that the benefits of extra risk-taking are questionable now. His approach is to "think about the future and understand what risks can happen so that they can be addressed before they happen."

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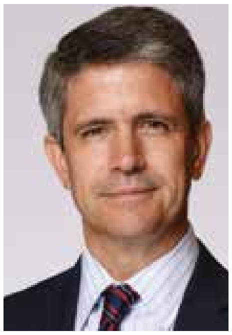

LDI: A FACTOR-BASED APPROACH

Grace Cleary-Yu, CFA

HOOPP's approach to LDI is unique; but there are other ways to derisk. In this Q&A, we speak with Don Raymond, managing partner at Alignvest and the former chief investment strategist at the Canada Pension Plan Investment Board, on what factor-based risk management involves and how it can help Canadian plans. Raymond was also a speaker at the Annual Pension Conference in Toronto.

What is a factor-based approach to LDI?

A factor-based approach to LDI extends standard asset-only factor-based methods for strategic asset allocation to incorporate liabilities. Larger plans are increasingly moving to factor-based approaches as they can provide a more intuitive and flexible approach to liability-based strategic asset allocation.

What does it involve?

Doing this involves four steps. The first step is to define risk factors spanning the (ideally investable) asset/strategy universe and the liabilities (e.g., growth, inflation, interest rates). The second step involves mapping assets and liabilities onto factors, i.e., determining their factor loadings. The third step is to develop forecasts of expected returns and the risk of the chosen factors over the time horizon of interest, typically 10 or more years. To forecast expected returns, investors can use methods based on equilibrium, risk-parity, anomaly, or current market prices, and to forecast risk, they can use methods based on covariance estimates.

The last step is to allocate risk across factors using your preferred methodology and using total balance sheet risk (assets vs. liabilities) to define risk using your preferred risk measurement. There are a few methodologies a plan can choose from to allocate risk (e.g., mean-variance and Black-Litterman, etc.).

When it comes to implementation, what type of pension plan can benefit more from factor-based approach, and why?

While all pension plans could benefit from a one-step, factor-based approach, the plans that would benefit the most fall into two categories. The first category is those pension plans in which a significant proportion of total balance sheet risk is presented by the liabilities (relative to cash). The second category is those plans that have strong or well-informed views on factor returns (e.g., belief in risk parity). In either case, a successful implementation will require more sophisticated analytical methods, investment processes, and reporting.

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